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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/780,395	02/17/2004	Maurice B. Steinman	200301842-2	1629

7590 09/29/2004

HEWLETT-PACKARD COMPANY
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EXAMINER

VO, TIM T

ART UNIT	PAPER NUMBER
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2112

DATE MAILED: 09/29/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/780,395	Applicant(s) STEINMAN ET AL.	
	Examiner Tim T. Vo	Art Unit 2112	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 February 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-7 is/are allowed.
- 6) ☒ Claim(s) 8-13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) * | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>2/17/04</u> . | 6) <input type="checkbox"/> Other: _____ |

Art Unit: 2112

Double Patenting

1. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

2. Claims 1-32 of patent 6,704,817, contain every element of claims 1-13 of instant application and as such anticipates claims 1-13 of the instant application. Therefore, claims 1-13 of the instant application is not patently distinct from the earlier patent claims and as such is unpatentable for obvious-type double patenting.

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

4. Claims 8-13 are rejected under 35 U.S.C. 102(e) as being Adusumilli et al. patent number 6,704,817 referred hereinafter "Adusumilli".

As for claim 8, Adusumilli teaches a method comprising:

Tracking the number of pending writes in a write queue (see column 5 lines 29-33);

Tracking the number of pending reads in a read queue (see column 5 lines 29-33);

Tracking the number of consecutively issued reads when the number of pending writes reaches a pending write threshold (see column 5 lines 23-29 and line 67 to column 6 line 1);

Tracking the number of consecutively issued writes when the number of pending reads reaches a pending read threshold (see column 5 lines 23-29 and line 67 to column 6 line 1);

Transition for issuance of reads to issuance of writes to issuance of writes when the number of pending writes reaches the pending write threshold and the number of consecutively issued reads reaches a consecutively issued read threshold (see column 4 lines 35-40); and

Transition for issuance of writes to issuance of reads to issuance of writes when the number of pending reads reaches the pending read threshold and the number of consecutively issued writes reaches a consecutively issued write threshold (see column 4 lines 35-40);

As for claim 9, Adusumilli teaches wherein transitioning from issuance of reads to issuance of writes comprises ceasing issuance of reads, waiting for a period of time, and then beginning to issue write after the period of time (see column 6 lines 7-25).

As for claim 10, Adusumilli teaches wherein transitioning from issuance of writes to issuance of reads comprises ceasing issuance of writes, waiting for a period of time, and then beginning to issue read after the period of time (see column 6 lines 7-25).

As for claim 11, Adusumilli teaches a system comprising:

A bus (see figure 1, bus 150);

A read queue configured to contain pending read transactions (see figure 1, read FIFO 130);

A write queue configured to contain pending write transactions (see figure 1,

write queue 120);

Control logic configured to select for issuance to the bus either read transactions from the read queue or write transactions from the write queue to reduce the number of transactions between read transactions and write transactions (see figure 1, control 110 and column 4 lines 35-40).

As for claim 12, Adusumilli teaches the control logic comprises a counter to track the number of pending write transactions in the write queue, and the control logic transitions from causing write transactions to be issued to causing read transactions to be issued when the counter reaches a threshold value (see column 3 line 64 to column 4 line 6).

As for claim 13, Adusumilli teaches the control logic comprises a counter to track the number of pending read transactions in the read queue, and the control logic transitions from causing read transactions to be issued to causing issuing write transactions to be issued when the counter reaches a threshold value (see column 3 line 64 to column 4 line 6).

Allowable Subject Matter

5. Claims 1-7 are allowed.

Examiner's Statement of Reasons for Allowance

6. The following is an Examiner's statement of reasons for the indication of allowable subject matter: Claims 1-7 are allowable over the prior art of record because the Examiner found neither prior art cited in its entirety, nor based on the prior art, found any motivation to combine any of the said prior arts. As for claim 1, prior art fails to

teach a mux having a first input coupled to the read queue and a second input coupled to the write queue and an output coupled to the bus.

7. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

8. The remaining claims, not specifically mentioned, is allowed for the same reason above.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tim T. Vo whose telephone number is 703-308-5862. The examiner can normally be reached on 7:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Rinehart can be reached on 703-305-4815. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



09/27/04

Tim T. Vo
Primary Examiner
Art Unit 2112